

TI - Frequency adjustment method for elastic surface wave device - involves measuring frequency characteristic of piezoelectric substrate during ECR ion beam etching on substrate

AB - J07074573 The frequency adjustment method employs a process which forms comb wave like electrode (4) on a piezo electric substrate (1). Then, a second process forms a silicon oxide film (5) over the substrate. Third process removes the surface layer of the silicon oxide film by ECR ion beam etching method and

 introduces a carbon fluoride layer. During the ion beam etching, the frequency characteristics of the substrate is measured.

 USEDVANTAGE - For use in information processing device, communication device and VHF, VHF applications. Monitors frequency characteristic of element and accordingly adjust it. Performs frequency regulation with high precision. Controls deterioration in frequency characteristic. Improves productivity.

- (Dwg.2/4)

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TI - METHOD FOR ADJUSTING FREQUENCY OF SURFACE ACOUSTIC WAVE ELEMENT

AB - PURPOSE: To highly accurately adjust a frequency by removing the surface layer of an oxidized silicon layer formed on a comb-line electrode by an ECR ion beam etching method for which fluorinated carbon is introduced while monitoring the frequency characteristics of an element.

- CONSTITUTION: A comb-line Al electrode pattern 4 is formed on a piezoelectric substrate 1 by an EB vapor deposition method and a wafer is prepared. An SiO2 film 5 is formed on the wafer by an RF sputtering method, the wafer is cut and mounted to a ceramic package, an electrode part on a chip and the terminal part of the ceramic package are connected by wire bonding and the surface acoustic wave element 12 is obtained. The element 12 is inserted to an ECR ion beam etching device, plasma is generated by C2F6 gas and the surface layer part of the SiO2 film is etched by an ion beam 10. At the time, the terminal part of the element 12 is connected to a network analyzer 13 and the frequency characteristics are monitored. The beam 10 is controlled by a shutter 11.

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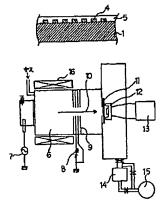
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